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A Flipped Learning Maiden Voyage: Insights and Experiences of Undergraduate Sport Coaching Students

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Abstract

Flipped Learning (FL) is a pedagogical approach which encourages students to learn independent of academic staff and take greater ownership and responsibility for their studies. Learners are exposed to new topics outside of formal lecture settings, as they complete problem-based activities prior to attending timetabled sessions. This preparation in-advance means class-based sessions can be delivered in a highly-interactive and practical-manner, promoting self-regulated learning. Employing a qualitative approach, this study explored insights and experiences of ten sport coaching students who encountered FL for the first time during the final year of an undergraduate sport coaching programme at a North of England University. Analysis of data generated five themes related to initial expectations and experiences of FL and value of FL in supporting student engagement. Findings provide evidence to inform future curriculum reform that may be more appropriate for meeting the academic capabilities, needs and motivations of modern day Higher Education (HE) students, together with supporting the re-tooling and professional development needs of academic and support staff across the sector.

Keywords: Engagement, Flipped Learning, Higher Education, Satisfaction; Undergraduate Sport Student.

Flipped Learning Introduction and Context

The nurturing of student employability involves exposing them to high-quality academic provision, which is academically stimulating and challenging, research-rich, practically applied and industry relevant (Rothwell & Arnold, 2007). The design, implementation and delivery of such curriculums is key if individuals are to obtain wide-ranging skills, behaviours, knowledge, attitudes, attributes and experiences which will enable employment success in today's competitive global market (Wilton, 2008; Yorke & Knight, 2006).

Modern-day graduate employers wish to recruit individuals who are self-motivated, intellectually curious, digitally literate and versatile, display initiative, creativity and inventiveness, possess effective time-management, self-regulatory and inter-personal communication skills plus high quality judgement and critiquing capabilities (Andrews & Higson, 2008; Bridgstock, 2009). However, evidence suggests many 21st century jobs require skill-sets which the conventional degree may fail to sufficiently develop (Kennett, Reed & Lam, 2011; McArthur, 2011).

A mounting evidence body reports how didactic instructional teaching approaches, in which learners remain predominantly passive recipients of information, may no longer be suitable for the changing size, profile, needs and diversity of the contemporary United Kingdom HE student population (Chiang & Wang, 2015; Choi, 2013; McLaughlin et al, 2014; McLean, Attardi, Faden, & Goldszmidt, 2016; Reddan, McNally & Chipperfield, 2016; Talbert, 2017). If modern-day university education is to prove successful in creating well-equipped work-ready individuals, there needs to be a HE response to the growing evidence base championing for greater implementation of 'active' learning environments over traditional directive teaching formats (e.g., large group lectures).

In recent years, considerable research from across the international HE sector has supported the re-transformation of curriculum design and delivery towards increasingly 'active' student learning environments, where promotion of student autonomy, empowerment and self-discovery is prioritised and nurtured (Boeve, Meijer, Bosker, Vugteveen, Hoekstra & Albers, 2017; Lo & Hew, 2017; Roach, 2014; Seery, 2015; Talbert, 2017; Velegol, Zappe & Mahoney, 2017). Grounded upon constructivist ideology, this 'active learning' method has the potential to build and strengthen a learning culture that impacts favourably upon student satisfaction, attendance, achievement, welfare and completion rates (Karabulut-Ilgü, Cherrez & Jähren, 2017; Lo & Hew, 2017). A popular approach which actively immerses students within their studies is FL. Although workload-intensive and time-demanding for academic and student populations (Boeve et al., 2017; Hayman, 2017; Lo & Hew, 2017), the past decade has witnessed significant growth in its popularity and implementation across diverse educational contexts and disciplines.

This main thrust of this pedagogical innovation seeks to consistently challenge, stimulate and stretch students, providing space for them to take greater ownership and responsibility, plus engaging them more deeply as self-directed independent learners (Karabulut-Ilgü, Cherrez & Jähren, 2017). Within a FL setting, students are introduced to new materials outside formal class-based settings via completion of pre-assigned tasks and activities, either independently or in small groups, before they attend timetabled sessions (Gilboy, Heinerichs & Pazzaglia, 2015; Gunyo, 2015; Lo & Hew, 2017; Talbert, 2017). Rather than passively receiving information via didactic instruction, class-time is spent undertaking authentic, hands-on, enquiry-based and student-led active learning strategies, which are important drivers in supporting students to reach their full potential (Gajjar, 2013; Jensen Kummer & Godoy, 2015; Seery, 2015; Strayer, 2012; Talbert, 2017).

At all times, students support one another to engage creatively in applying their knowledge (developing) of theoretical concepts, models and subject matter to real-world, well-designed, authentic problems, scenarios and settings, taking advantage of the enhanced opportunity for theory to be applied in practice (Roehl, Reddy & Shannon, 2013). Engaged students remain actively involved at all times, through frequent peer-to-peer interactions within small group debates and whole-class discussions. This enables greater scope to solve problems, make decisions, communicate ideas and beliefs, consolidate, demonstrate and critically apply knowledge and to share and reflect upon practical examples and experiences (Boeve et al., 2017; Findlay-Thompson & Mombourquette, 2014; O'Flaherty & Philips, 2015; Talbert, 2017).

Literature Review

Over the past decade, a plethora of studies investigating the FL experiences of science and medical students from North America and Australia have been published (e.g., Davies, Dean & Ball, 2013; McLaughlin et al., 2013; Street, Gilliland, McNeil & Royal, 2015). Ryan (2013) reported that, through FL, undergraduate biochemistry students succeeded in improving various soft skills, including time management and teamwork, appropriate for employment and life-long learning. Alternatively, Jensen et al., (2015) identified no significant differences in performance and satisfaction of biology students who encountered both FL and non-FL approaches throughout their degree program. Hagen and Fratta (2014) reported the underperformance of intrinsically motivated engineering students who encountered a FL environment. They also found students felt underprepared for summative assessments because they lacked confidence in self-managing their own learning.

McLean et al., (2016) reported that medical science students enjoyed the interactive and collaborative nature of FL and refined their independent learning skills as a consequence. McLaughlin et al., (2014) exposed a first-year pharmaceuticals cohort to self-paced, online videos instead of formal

lectures, and used subsequent class time to immerse students in active-learning exercises. Class attendance, student achievement and perceived value of the approach all increased as the module progressed. Butt (2014) surveyed actuarial students at the start and end of a five-month semester to obtain views on their experiences of FL. Feedback was mainly positive, with the majority indicating that they wished to encounter the approach again during the remainder of their undergraduate studies.

FL was implemented with education students by Al Zahrani (2015). Results were mixed, in that the approach was perceived to promote professional skills development (e.g. creativity), but was generally time demanding, misinterpreted and misunderstood. Employing several data-collection tools, including questionnaires and semi-structured interviews, Shih and Tsai (2017) examined undergraduate marketing students' experiences of FL. Findings revealed increased learning effectiveness, autonomy, motivation, interest, plus team-work. Both Hung (2015) plus Talley and Scherer (2013) found FL to be warmly received and a positive impact upon satisfaction, motivation and active participation in the learning process with undergraduate english and psychology students respectively. Gilboy et al., (2015) revealed the great majority of 142 undergraduate nutrition students enjoyed the FL approach and preferred it to previously encountered traditional pedagogies.

Love et al., (2014) found mathematics students particularly enjoyed the increased opportunities FL offered for working regularly with fellow peers to solve problems and think critically, whilst Chen and Chen (2014) discussed how the approach positively influenced attendance, satisfaction and motivation to learn of information management students when compared to previous 'lecturer-led' versions of the course. Roach (2014) revealed collegiate students enrolled on a large economic module responded favourably to FL, with 94% finding consequent face-to-face classes to be more interactive than traditional approaches. Over an eight-week period, Boeve et al., (2017) found no significant differences between study behaviour plus consequent academic performance and learning gain encountered by science students exposed to only FL and psychology students who only encountered traditional lecture and seminar delivery. Mok (2014) explored undergraduate information systems students experiences of FL, finding it to be generally very positive with many respondents considering it effective, engaging, empowering and helpful for improving confidence to take on greater ownership for learning. Strayer (2012) employed FL to deliver an introductory undergraduate statistics module, finding the approach increased student task-orientation and innovation. However, in general, the majority disliked FL, preferring more tutor-led methods of teaching.

More recently, Reddan et al., (2016.) undertook one of the few studies to focus on the impact of FL with undergraduate sports students. Through quantitative surveys, they reported having more positive and sustained interactions with both academic staff and peers in FL contexts than in the non-FL modules upon their degree programme.

Hayman (2017) extended the work by Reddan and colleagues. This study revealed how FL helped transform a final-year undergraduate sports coaching module, historically typified by student disengagement, erratic attendance and under-performance, to one exemplifying dynamic engagement and improvements in attendance, attitude, motivation to learn, achievement and employability skills development. Each participant maintained three personalised audio blogs about the FL strategy; the first captured prior knowledge and expectations, the second initial experiences and the third critical reflections of the entire twelve-week module. Data deriving from the blogs indicated that participants were initially overwhelmed by greater workload, responsibility and autonomy, but soon acclimatised, with real engagement, vigour and excitement. Completion of pre-arrival tasks meant students attended classes keen to learn more about contemporary sports coaching principles and practices. Overall, participants acknowledged that FL was more enjoyable and engaging than familiar lecture-based delivery methods.

Study Rationale

Sport-specific research exploring the impact of FL on student experience is limited, which is surprising considering the large cohorts recruited annually to academic programmes within the discipline. To break new ground and redress this balance within the literature, a distinctive aspect of this qualitative study was to move beyond simplistically evaluating if an under-represented sports student population considered FL to be 'superior' or 'inferior' compared with traditional lecture-style formats. Therefore, the primary aim of this study was to undertake in-depth qualitative interviews with ten, final-year, undergraduate sport coaching students which captured their FL experiences and the consequent impact upon their satisfaction and engagement levels.

Background Module Information

Over a twelve-week period between September 2016 and December 2016, sixty-three students - enrolled at a post-92 university in Northern England - completed a final year undergraduate sports coaching module, delivered using FL. Previously, the module was taught over a whole academic year, by means of a two-hour lecture at the start of the week (Tuesday) and subsequent two-hour seminar format (Friday), on a fortnightly basis.

The modified delivery required student completion of several pre-attendance activities and presence at a one-hour seminar (n=63) and subsequent ninety-minute tutorial (n=21) each week over a three-month period. All class-based sessions were facilitated solely by the module leader (author)

Students were encouraged to engage with pre-assigned activities comprising several short, problem-based, real-world tasks, plus supplementary PowerPoint materials and readings (Examples of all activities completed are

available from the author on email request.) All materials were uploaded to the institutional virtual learning environment in early September 2016. Elements of the pre-attendance workload were completed either individually, in pairs, or in small groups no larger than four. All activities introduced students to the material to be debated, compared, evaluated and critiqued in class and encouraged the application of theory to practice.

Method

Participants

The sample comprised ten (male = 8 and female = 2) final year, full-time undergraduate sport coaching students (M age = 21.3, SD = 2.7). Pre data-collection, all were assigned pseudonyms to protect anonymity, informed they could withdraw from the study at any time and provided written informed-consent. Once institutional ethical clearance was granted, face-to-face debriefs reinforcing the study aims, objectives and procedures to be followed were completed. For all participants, individual semi-structured interviews were undertaken at convenient times and locations throughout May 2017.

Design

Semi-structured interviews commenced with open-ended questions which probed initial expectations and thoughts towards FL (e.g., explain what it was like to experience FL for the first time), progressing onto exploring overall engagement with the approach (e.g., discuss how the FL experience impacted upon your overall engagement with the module). Supplementary probes were posed ad-hoc to elicit further richness and depth to specific responses. Examples included 'how was this different to other modules', 'elaborate on your reasons for thinking this', 'why might it have made you feel this way', 'what do you think made that so particularly challenging' and 'why do you believe this to be the case'. This format helped enable the interview direction to be increasingly participant rather than schedule guided (Smith & Osborn 2003).

Data Analysis

Interviews were transcribed-verbatim and subjected to thematic-analysis. Duration ranged in length between 29 and 43 minutes. Each transcript was read through several times by the author, with notes reflecting interesting and significant participant comments and meanings placed within margins. Initial associations and connections based on similarities between emergent themes were made, resulting in the development of two main categories. Interview extracts representing each theme were selected. The final analysis stage involved developing written accounts from these themes. This account was reviewed and re-written several times by the author. Four weeks post-interview, each student undertook a short member-checking telephone

conversation with the author to enhance accuracy and validity of responses (Lincoln & Gubba, 1985).

Findings and Discussion

The results of the data analysis yielded five themes that were subsequently grouped within two categories.

Table 1: Category and Theme Classification

Category	Theme
Initial FL Expectations and Experiences	<p>(1) Limited Understanding and Awareness</p> <p>(2) Collective Non-Committal, Unease and Resistance</p> <p>(3) Entrenched Low-Level Confidence to Engage</p>
Value of FL in Supporting Student Engagement	<p>(4) Linchpin for Progressively Self-Regulated Learning</p> <p>(5) Learning Collaboratively Through Peer Partnership Networks</p>

Initial FL Expectations and Experiences

Limited FL Understanding and Awareness

Prior to the module commencing, each participant had limited knowledge, nor any prior experiences of FL delivery (Clark, 2015; Snyder, Paska & Besozzi, 2014; Wang, 2016). During the first two years of their degree program, they had become acclimatised and accustomed to predominantly didactic and structured delivery modes. All discussed having had considerable exposure with traditional, slower-paced, tutor-led models of teaching and learning (e.g., large group lectures). The introduction of FL immediately disrupted this relationship, placing greater levels of control for learning with the participants. This caused considerable feelings of challenge, uneasiness, vulnerability and discomfort.

"I was well off my comfort zone at the start, which made me quite anxious, and I skipped some sessions in the first few weeks because of this. Looking back, I just tinkered round the edges with FL really and should have got more stuck in". (Participant 6)

"I was just not that familiar with having work to complete before attending classes at university". (Participant 9)

Managing the adjustment to FL proved problematic for most. Initially, the majority had misconceptions, were unconvinced and overwhelmingly sceptical towards FL as an effective strategy for increasing their overall engagement, satisfaction and achievement within the module (Gannod, Burge & Helmick, 2008; Hayman, 2017).

"I was not massively sure on what the FL approach was all about and I just wanted to turn up to lectures and be told the information I needed to pass my assignments". (Participant 1)

"It was different and confusing to what we were normally used to ". (Participant 7)

"It felt like I was going back to my school and sixth-form days when we were given homework, so at first I was thinking to myself if this was absolutely necessary as I thought I had moved on from this kind of thing". (Participant 10)

Collective Non-Committal, Unease and Resistance

During the modules early stages, several participants felt especially overwhelmed, bewildered, dispirited and underprepared for what lay ahead. They struggled to adjust and connect with the increasingly student-led and active participation approach they had been exposed too (Gannod, et al., 2008; Hayman, 2017; Grypp & Luebeck, 2015).

"I found the jump in having to become better organised and finding time to do the out of class work really demanding, especially when assignments for other modules started to arrive". (Participant 4)

"It was a struggle to motivate myself even though some of the activities looked quite interesting". (Participant 6)

"I was not so bothered at first with FL and was a long way from being on-board. I just found it a bit tedious and that only started to fade about half-way through the module". (Participant 9)

The fast-paced nature and high levels of required engagement with FL were challenging for participants to manage (Talbert & Valey, 2012; Wang, 2016). Several expressed their worries, unease, nervousness, reservations and uncertainties at having to complete the prescribed pre-attendance weekly work-load requirements (DeSantis, Van Curen, Putsch & Metzger, 2015). General buy-in and uptake was limited.

"I had a go at most of the things I was asked to do but I do think having no experience of FL in the first two years at university did not help at all". (Participant 3)

"I tried to take things with an open-mind, but although I quite liked the hands-on feel of FL, it was really difficult to get used to". (Participant 5)

"I had never been taken of my comfort zone like this and had got used to just turning up to classes but now I was expected to factor in completing the activities beforehand, so it was hard as you did not want to be seen as someone who was not doing the work and struggling". (Participant 8)

Over half felt they lacked the necessary motivation and organisation skills to deal with the significant increases in responsibility, accountability, work-load and independence placed upon them by the changing nature and demands of the FL environment (Abeysekera & Dawson, 2015; Betihavas, Bridgman, Kornhaber, & Cross, 2016; Margoniner, 2014).

"I felt really unprepared for what was coming and at first I disliked everything about FL". (Participant 1)

"I quite liked FL but it was difficult to get used to but I could also see how others in the class had different opinions and did not like it so much". (Participant 7)

"A couple of my mates were worried about not having the time to complete the out of class work because they travelled in from home each day to uni and also worked most evenings". (Participant 10)

Entrenched Low-Level Confidence to Engage

When probed further about their FL concerns, several mentioned lacking a general sense of confidence and belief to fully immerse, engage then consequently achieve within the module. Several discussed their turmoil and reluctance to take greater responsibility and ownership for constructing their learning (Snyder et al., 2014; Wang, 2016).

"It was hard work and I had plenty of doubts about being able to find time to complete the workload and I was just thinking go with the flow and things will surely get easier. But I also think it would have been better to trial FL in first and second year as that would have given me more confidence". (Participant 3)

"I thought there was no way I could learn this way because I was used to just turning up to sessions and listening to the lecturers and taking notes down from the slides". (Participant 4)

"I felt nervous as I was expected to do things I had not done much off before, such as speaking up in class, so I guess I felt under the pump pretty much and of my depth". (Participant 7)

Participants especially lacked general confidence in their ability to successfully plan and complete prescribed workloads, requiring repeated email and face-to-face reassurance from the module leader. Several discussed their struggles to cope with the organisational and operational demands which FL placed upon them.

"I struggled with the amount of work we had to do, especially in class, as it was more than any other module we had before and I thought there was no way I can complete everything that is expected". (Participant 1)

"The class was polarised really with some liking FL and some not, so maybe doing a partial bit of flipping with some normal lectures running some weeks and some FL in others would have been better". (Participant 2)

"Not always completing all the tasks did make me worry a bit and lose some confidence in my ability as I have always had a decent reputation with lecturers as someone who turns up and is capable of getting decent grades". (Participant 9)

Value of FL in Supporting Student Engagement

Linchpin for Progressively Self-Regulated Learning

As the weeks passed, participants displayed initial signs of engaging more regularly, proactively and enthusiastically with FL and the associated active-learning principles. Their confidence and ability to self-direct and monitor, make well-informed decisions, problem-solve and apply theory and concepts to real-world case studies progressively grew in stature (Chen, 2016; Chao et

al., 2015; Clark, 2015; Mazur et al., 2015; Mok, 2014; Love, Hodge, Grandgenett & Swift, 2014). This developing 'buy-in' to FL was reflected through increased pre-assigned activity completion and consequent attendance, contributions to group-work and formative assessment performance within timetables classes. They started leading the way as autonomous learners, displaying greater impetus, energy and ownership.

"I had a difficult start with FL but I must say it grew on me after a couple of weeks and this was because I started to do ok in the class revision tests and liked the discussions and having the little challenges to do with the time limits".

(Participant 3)

"I found it tough but I could see I was improving my knowledge of all the talent moderators we had covered which motivated me and made me happier to do the work and ask questions if I needed to". (Participant 7)

Participants started slowly displaying higher levels of initiative, resilience, commitment and self-discipline to learn. They gradually acclimatised to the expected work-ethic demands and requirements of FL (Bhagat, Chang & Chang, 2016). In addition to studying alone, a majority also completed assigned activities more intimately and engagingly with fellow peers, at their own pace and in their own time and space. This particularly supported their increasing ability and capacity to effectively self-manage, organise, plan ahead and learn independently with limited academic staff intervention and input. (Bailey & Smith, 2013)

"I would arrange to meet some of the class on campus, like the library hub, and we would work through the tasks together. I really liked doing this as we got the work finished but in a relaxed and informal way". (Participant 10)

Several described how FL supported them in becoming increasingly self-aware of their current academic strengths and needs, thus motivating them to seek assistance from peers and set challenging goals to ensure continued positive and lasting headway.

"Watching the video on sport diversification and then taking the main points and presenting them to the rest of the class in a poster was really useful in helping me improve at finding the main points and then explaining them further without waffling on". (Participant 5)

"I remember doing one of the short written answer tests in class and I did not have a clue so it got me thinking about how I needed to take things a bit more seriously and change my approach and attitude to uni life". (Participant 7)

Undertaking regular formative assessment played a leading role in supporting participants' self-regulated learning, ongoing self-confidence development and day-to-day FL engagement. Several positively explained how this strategy helped develop their explicit awareness of the academic progress they were making.

"I liked the formative assessments we had in class each week, like the quizzes we did, as they showed how my learning was going". (Participant 4)

"It was after about a month when things started making some sense because I had attended all the sessions but struggled on all the tests we did. But this made me realise that I had not put enough time and effort into the work". (Participant 6)

In addition to subject-specific knowledge, participants explained how FL helped nurture their personal and professional skills development, including time management, independent study skills, critical thinking, self-awareness, emotional intelligence, literature searching, academic writing, reflective practice, teamwork, negotiating and active listening (Chen, 2016; Mok, 2014; Yelamarthi, Member & Drake, 2015).

"By getting me to go and find out more about the talent development theories we covered like relative age effect and deliberate play and deliberate practice, it felt like I was being exposing to the tip of the iceberg and I had to go off on my own and dig deeper". (Participant 1)

"The FL method was a clever way of allowing me to improve some of my non-academic skills which I will need when I graduate and start looking for jobs". (Participant 2)

"I gained plenty from just listening and taking in other people's opinions and then going finding out how what they said compares or not with what the research says". (Participant 7)

Learning Collaboratively Through Peer Partnership Networks

FL promoted the growth of supportive peer-learning networks, which helped students forge increasingly positive and considerate professional relationships with each other. Applying sport coaching principles, concepts and theories into practice and comparing personal experiences with peers was a noticeably popular aspect of the module. For all participants, this initiated healthy debate about prior experiences, values, beliefs, insights and opinions on contemporary sport coaching principles, including talent identification and

development, positive youth development, high performance sport and coach education. Participants displayed a developing appetite for learning collaboratively with peers, which resonates with previous literature and good practice in developing student and staff rapport, connection and affinity (Hayman, 2017; McGivney-Burelle & Xue, 2013; Mok, 2014).

"It was nice to have the chance to forge closer relationships with the other students and I think this was an important part why FL started to become more accepted by everyone".
(Participant 1)

"From the week we covered the nature against nurture debate, I started feeling more comfortable with FL and the main reason was because I liked hearing from other people on my course and what they thought about things we were looking at". (Participant 6)

The popularity of class-based problem solving activities continued to improve and created valuable opportunities for the participants' personal and professional inter-relationships to blossom (Bailey & Smith, 2013; Swithenbank & DeNucci, 2014). They found working collaboratively, exuberantly and inclusively provoked greater levels of student-led interaction between peers and the module leader (Bailey & Smith, 2013; Mok, 2014). This sense of commonality and belonging supported a developing sense of relatedness within an academic community and eased their transition to less dogmatic, structured and lecturer-centred learning methods (Clark, 2015; Kettle, 2013; Kuh et al. 2008).

"It has to be that students get on and build rapport with each other or else I believe FL is not worth doing in my opinion and once that starts then I think you are much more likely to want to try your best and be motivated to get on". (Participant 6)

"The discussions in class were great, like the one about is there a need for specialising or not early as a way to reach the top in sport. Most people had some interesting things to say and it made me think about how my practice could change for the better". (Participant 8)

"FL made me realise how much I learned from working with others in my class". (Participant 10)

The fast-paced, involving and dynamic FL environments became an important catalyst in nurturing and maintaining the positive-vibe and sense of participant connection and fulfilment. Most enjoyed completing the authentic, real-world case-studies, role-plays and scenarios, through the sharing of candid thoughts, feelings and experiences. As weeks passed, they opened-up more in class, providing deeply-personalised, research-rich and energy-laden

contributions and insights to sessions. They especially gained from listening to the steady flow of insightful anecdotes from peers, within both small-group and whole-class debates, which were relatable to their own real-life experiences. This consequently nurtured a developing sense of cohort belonging, identity, accomplishment and unity

"I liked hearing stories from the class about their sports careers and their experiences of being coached and then seeing if they linked or not with the topics and the theories we were covering on the module". (Participant 1)

"Our group looked forwards to hearing your (author) stories about the kids football team you coach and having the chance to ask questions about how you get on trying to put the theory into practice". (Participant 5)

"It was nice to be together in a room which had breakout tables and where we could use the computers and have access to the internet to undertake the tasks sometimes alone or with others". (Participant 6)

Discussion

In recent years, FL has grown in popularity across diverse educational contexts and disciplines. This study extended the extant literature by carefully considering final-year undergraduate sport coaching student's expectations, opinions and experiences of FL. In the beginning, participants lacked general understanding of the approach and were generally overwhelmed by the responsibility, independence, workload and autonomy they faced. Historically, participants had tended to experience traditionally tutor-led models of teaching and learning (e.g., large group lectures) which did not place them as centrally within the learning experience as FL.

Initially, the majority of participants found the transition to FL and the increasingly active, student-led contexts challenging to manage, thus causing heightened worry, unease, nervousness and uncertainty. As the weeks passed and they started to acclimatise with the approach, there were gradual signs of improvement in satisfaction, outlook, compliance, perseverance, effort and engagement. Their praise and criticism towards FL remained balanced, yet the majority had started arriving to classes more prepared, confident and motivated to learn.

Real-world and practically applied activities combined with regular formative assessment were well-received. FL helped to both create and promote supportive peer-relations and interaction between participants and the module leader. The experience also supported wide-ranging personal (e.g., reflection and self-confidence) and professional skill (e.g., teamwork and negotiating) development. Findings provide evidence to inform future

curriculum restructure, design and delivery, together with associated academic and support staff professional development needs.

The limited amount of sport-specific FL research provides considerable avenues for further investigation. For example, mixed-methods studies exploring the FL experiences of postgraduate sports students and academic staff who implement the approach would prove valuable and timely contributions to the extant literature.

Based on the study findings, a set of 'take-home' recommendations and guidelines are provided in table 2 for academics, educational developers, support staff and senior management teams seeking guidance to plan and implement FL with their future teaching and learning practice.

Table 2: Recommendations and Guidelines

- Be honest and up-front with future student cohorts prior to them embarking on their FL experience and educate them sufficiently about its very concept prior to implementation. Place special emphasis on the added responsibility, workload and independence required, what to expect in and out of class, plus how much time they will need to commit to independent study. Also, specifically map out what the module will look like and how it differs from traditional delivery formats.
- It is important to secure suitable classroom space and infrastructure which enables for interactive, technology enhanced and group-based learning. Ensuring sessions are likely timetabled within open-plan settings with information technology facilities available is strongly recommended.
- The early stages of FL can be a particularly sensitive time for student uptake and engagement. Therefore, it is important to offer additional academic and personal guidance to ensure they have accurate expectations of FL and feel suitably confident, connected, prepared and supported. Especially during the opening weeks, have academic staff with FL expertise available to field questions and offer clear, accurate and consistent information to strengthen awareness of expected individual roles and responsibilities.
- The guidance and direction, approachability and nature of interactions displayed by academic staff can make students feel valued and understood. Effective FL delivery requires them to be accessible, empathetic, emotionally intelligent, outgoing, caring and sensitive. Therefore, they should be made explicitly aware of this and training to up-skill in these qualities, if required, provided.

- Encourage academic staff to complete all assigned pre-attendance tasks, as this opportunity to openly discuss and contribute their own experiences with their learners is likely to strengthen rapport and consequent personal and professional relationships with students.
- Invite industry colleagues to partner academic staff and students in co-creating new learning resources, with a particular emphasis on masking the integration of theory into practice
- Adopting a FL approach may prove challenging to administer, coordinate and manage when there are significantly larger module cohorts (n<150) and academic module-delivery teams (e.g., ability to circulate freely around class and eaves drop into all discussions).
- FL is time-demanding and impacts heavily on academic workload. This is particularly noticeable leading up to the start of semester, when all resource development needs to be completed.
- Set-up regular opportunities for academic staff to observe FL classes in action, plus communities of practice with colleagues who use FL, or intend on doing so in the future. This will encourage and support sharing of ideas and best practice, how to improve further and the merits of learning from mistakes.
- Contemplate progressively implementing a partial FL module instead of flipping entirely all at once. This may comprise weekly 2-3 hour face-to-face class-based sessions comprising brief '5-10 minute lectures', plus regular opportunity for student directed 'active' breakout activities and formative assessment opportunities.

References

Abeysekera, L., & Dawson, P. (2015). Motivation and cognitive load in the flipped classroom: definition, rationale and a call for research. *Higher Education Research and Development*, **34**, 1-14.

Al-Zahrani, A. (2015). From Passive to active: the impact of the flipped classroom through social learning platforms on higher education students' creative thinking. *British Journal of Educational Technology*, **46**, 1133-1148.

Bates, S. and Galloway, R. (2012). *The inverted classroom in a large enrolment introductory physics course: a case study*. York: The Higher Education Academy.

Betihavas, V., Bridgman, H., Kornhaber, R., & Cross, M. (2016). The evidence for 'flipping out': a systematic review of the flipped classroom in nursing education. *Nurse Education Today*, **38**, 15-21.

- Bhagat, K., Chang, C., & Chang, C. (2016). The impact of the flipped classroom on mathematics concept learning in high school. *Educational Technology & Society*, **19**, 134-142.
- Boeve, A., Meijer, R., Bosker, R., Vugteveen, J., Hoekstra, R., & Albers, C. (2017). Implementing the flipped classroom: an exploration of study behaviour and student performance. *Higher education*, **74**, 1015-1032.
- Butt, A. (2014). Student views on the use of a flipped classroom approach: evidence from Australia. *Business Education and Accreditation*, **6**, 33-43.
- Cassidy, S. (2006). Developing employability skills: peer assessment in higher education. *Education and Training*, **48**, 508-517.
- Chao, C., Chen, Y., & Chuang, K. (2015). Exploring students' learning attitude and achievement in flipped learning supported computer aided design curriculum: a study in high school engineering education. *Computer Applications in Engineering Education*, **23**, 514-526.
- Chen, Y., & Chen, N. (2014). Is flip enough? Or should we use the flipped model instead? *Computers & Education*, **79**, 16-27.
- Chen, L. (2016). Impacts of flipped classroom in high school health education. *Journal of Educational Technology Systems*, **44**, 411-420.
- Chiang, Y., & Wang, H. (2015). Effects of the in-flipped classroom on the learning environment of database engineering. *International Journal of Engineering Education*, **31**, 454-460.
- Choi, E. (2013). Applying inverted classroom to software engineering education. *International Journal of E-Education, E-Business, E-Management and E-Learning*, **3**, 121-125.
- Clark, K. (2015). The effects of the flipped model of instruction on student engagement and performance in the secondary mathematics classroom. *Journal of Educators Online*, **12**, 91-115.
- Davies, R., Dean, D., & Ball, N. (2013). Flipping the classroom and institutional technology integration in a college-level information systems spreadsheet course. *Educational Technology Research and Development*, **61**, 563-580.
- DeSantis, J., Van Curen, R., Putsch, J., & Metzger, J. (2015). Do students learn more from a flip? an exploration of the efficacy of flipped and traditional lessons. *Journal of Interactive Learning Research*, **26**, 39-63.
- Gajjar, N. (2013). The role of technology in 21st century education. *International Journal for Research in Education*, **2**, 23-25.

Gannod, G., Burge, J., & Helmick, M. (2008). Using the inverted classroom to teach software engineering. In *Proceedings of 2008 ACM/IEEE 30th International Conference on Software Engineering* Leipzig, Germany: ACM Digital Library.

Gilboy, M., Heinerichs, S., & Pazzaglia, G. (2015). Enhancing student engagement using the flipped classroom. *Journal of Nutrition Education and Behavior*, **47**, 109-114.

Grypp, L., & Luebeck, J. (2015). Rotating solids and flipping instruction. *Mathematics Teacher*, **109**, 186-193.

Hayman, R. (2017). Using 'flipped classroom' to place sport students' learning at centre stage: insights and food for thought. *Journal of Educational Innovation, Partnership and Change*, 23-34.

Hagen, E., & Fratta, D. (2014). Hybrid learning in geological engineering: Why, how, and to what end? In M. Abu-Farsakh, X. Yu, & L. R. Hoyos (Eds.), *Proceedings of Geo-Congress 2014 Technical Papers: Geocharacterization and modeling for sustainability* (pp. 3920–3929). Atlanta, GA: ASCE.

Hung, H. (2015). Flipping the classroom for English language learners to foster active learning. *Computer Assisted Language Learning*, **28**, 81-96

Jensen, J., Kummer, T. & Godoy, P. (2015). Improvements from a flipped classroom may simply be the fruits of active learning. *Life Sciences Education*, **14**, 1-12.

Karabulut-Ilgu, A., Cherrez, N., & Jahren, C. (2017). A systematic review of research on the flipped learning method in engineering education. *British Journal of Educational Technology*.

Kennett, D., Reed, M., & Lam, D. (2011). The importance of directly asking students about their reasons for attending higher education. *Issues in Educational Research*, **21**, 65-74.

Kettle, M. (2013). Flipped physics. *Physics Education*, **48**, 593-596.

Lincoln, Y., & Gubba, E., (1985). *Naturalistic Inquiry*, London, Sage.

Lo, C., & Hew, K. (2017). Research and practice in technology enhanced learning a critical review of flipped classroom challenges in k-12 education: possible solutions and recommendations for future research. *Research and Practice in Technology Enhanced Learning*, **12**, 1-22.

Love, B., Hodge, A., Grandgenett, N., & Swift, A. W. (2014). Student learning and perceptions in a flipped linear algebra course. *International Journal of Mathematical Education in Science and Technology*, **45**, 317-324.

Margoniner, V. (2014). Learning gains in introductory astronomy: Online can be as good as face-to-face. *The Physics Teacher*, **52**, 298-301.

Mazur, A., Brown, B., & Jacobsen, M. (2015). Learning designs using flipped classroom instruction. *Canadian Journal of Learning and Technology*, **41**, 1-26.

McArthur, J. (2011). Reconsidering the social and economic purposes of higher education. *Higher Education Research and Development*, **30**, 737-749.

McLaughlin, J., Griffin, L., Esserman, C., Davidson, C., Glatt, D., Roth, M., Gharkholonarehe, N., & Mumper, R. (2013). Pharmacy student engagement, performance, and perception in a flipped satellite classroom. *American Journal of Pharmaceutical Education*, **77**, 196-209

McLaughlin, J., Roth, M., Glatt D., Gharkholonarehe, N., Davidson, C., Griffin, L., Esserman, D. and Mumper, R. (2014). The flipped classroom: a course redesign to foster learning and engagement in a health professions school. *Academic Medicine*, **89**, 236-243.

McGivney-Burelle, J., & Xue, F. (2013). Flipping calculus. *Primus*, **23**, 477-486.

McLean, S., Attardi, S., Faden, L., & Goldszmidt, M. (2016). Flipped classrooms and student learning: not just surface gains. *Advances in Physiology Education*, **40**, 47-55.

Mok, H. (2014). Teaching tip: the flipped classroom. *Journal of Information Systems Education*, **25**, 7-11.

Reddan, G., McNaily, B. and Chipperfield, J. (2016). Flipping the classroom in an undergraduate sports coaching course. *International Journal of Sports Science & Coaching*, **11**, 270-278.

Roach, T. (2014). Student perceptions towards flipped learning: new methods to increase interaction and active learning in economics. *International Review of Economics Education*, **17**, 74-84.

Rothwell, A., & Arnold, J. (2007). Self-perceived employability: development and validation of a scale. *Personnel Review*, **36**, 23-41

Seery, M. (2015). Flipped learning in higher education chemistry: emerging trends and potential directions.' *Chemistry Education Research and Practice*, **16**, 758-768.

Shih, W., & Tsai, C. (2017). Students` perceptions of a flipped classroom approach to facilitating online project-based learning in market research courses. *Australian Journal of Educational Technology*, **33**, 1-18.

Snyder, C., Paska, L. M., & Besozzi, D. (2014). Cast from the past: using screencasting in the social studies classroom. *The Social Studies*, **105**, 310-314.

Strayer, J. (2012). How learning in an inverted classroom influences cooperation, innovation and task orientation. *Learning Environments Research*, **15**, 171-193.

Street, S., Gilliland, K., McNeil, C., & Royal, K. (2015). The flipped classroom improved student performance and satisfaction in a pre-clinical physiology course. *Medical Science Educator*, **32**, 35-43

Talbert, R. (2017). Flipped learning: a guide for higher education faculty. Stylus Publications.

Talley, C., & Scherer, S. (2013). The enhanced flipped classroom: increasing academic performance with student-recorded lectures and practice testing in a "flipped" stem course. *The Journal of Negro Education*, **82**, 339-347.

Velegol, S., Zappe, S., & Mahoney, E. (2015). The evolution of a flipped classroom: evidence-based recommendations. *Advances in Engineering Education*, **4**, 1-37.

Wang, Y. (2016). Could a mobile-assisted learning system support flipped classrooms for classical Chinese learning? *Journal of Computer Assisted Learning*, **32**, 391-415.

Wilton, N. (2008). Business graduates and management jobs: an employability match made in heaven? *Journal of Education and Work*, **21**, 143-158

Yelamarthi, K., Member, S., & Drake, E. (2015). A flipped first-year digital circuits course for engineering and technology students. *IEEE Transactions on Education*, **58**, 179-186.

Yorke, M., & Knight, P. (2006). *Embedding employability into the curriculum. Learning and Employability Series One*. York: Higher Education Academy.

Appendices

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